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Meaningful modalities

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Summary

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Background

Communication partners encounter serious difficulties in everyday interaction and communication with persons who are Congenitally DeafBlind (CDB). These difficulties are, among others, caused by the fact that there appears to be a ‘communicative modality mismatch’ between the interactive and communicative behavior repertory of persons who are CDB, on the one hand, and their communication partners on the other hand. Due to the dual sensory impairment, the tactile-bodily communicative modality is the preferred communicative modality for persons who are CDB. Since the communication partners of persons who are CDB are able to rely on both vision and hearing, they prefer using the auditory-visual modality for everyday interaction and communication. In an attempt to suggest a solution for the difficulties with which persons who are CDB and their communication partners are faced (e.g. adequate recognition of, interpretation of and response to interactive and communicative behaviors, creating harmonious interaction and communication, etc.), the Intervention Model on Tactile Communication (IMTC) has been developed and implemented. Since interaction and communication are strongly related processes, the IMTC focuses on both tactile-bodily interaction (defined as: ‘a process of mutually influencing each other’s behaviour’) and tactile-bodily communication (defined as: ‘a form of interaction in which meaning is transmitted by the use of utterances that are perceived and interpreted by the partner’). The development and evaluation of the IMTC are central in this study.

The background and rationale of the current study are presented in

detail in **Chapter 1**. Furthermore, this chapter describes: a) the characteristics of the target group of persons who are CDB; b) the aim of the intervention and, c) an outline of research question and sub-questions that underlie the study that is carried out.

In **Chapter 2** the development and theoretical underpinning of the IMTC are described. Since the restricted access to the distance senses from birth on or from a very early age in life makes gathering and processing information from the environment by using one of the conventional communicative modalities (the oral-auditory- (i.e. talking) and/or the gestural-visual (i.e. signing) communicative modality) impossible for persons who are CDB, they are forced to actively use alternative interactive and communicative strategies by means of the tactile-bodily modality. Dependence on a communicative modality that is not the modality that is actively used by communication partners, obviously seriously impedes processes of interaction and communication and communicative development. The creation and development of an intervention program with a focus on the adequate use of the tactile-bodily modality, like the IMTC, can be regarded as a first important step in optimizing these processes.

The IMTC consists of three phases. The first phase focuses on Tactile Sign Language of the Netherlands (TSLN), whereas the second and third phase focus on Tactile Interaction and Tactile Communication respectively. The first intervention phase is carried out by qualified teachers on TSLN. Both the second and third intervention phase are carried out by a trained communication coach. Implementation of the intervention by the coach occurs by using the nine-step protocol (Figure 1, p. 36).

Communication partners' requests for coaching with regard to the use of tactile-bodily interactive and communicative behaviors in everyday situations with a particular person who is CDB are presented to the coach during the first step of the protocol. In addition, the coach gathers the additional information with regard to the different relevant interactive and communicative characteristics of the person who is CDB during the second step of the protocol. This second step is completed by the definition of the target questions for coaching by the coach. During the third step, the communication coach is engaged in the process of designing a tailor made course on TSLN. Communication partners are trained in using TSLN in everyday practice during step 4. By means of the analysis of video fragments from interaction situations the coach defines the intervention aims and target behaviors with regard to interaction during step five. During the sixth step, communication partners are trained in using tactile-bodily interactive behaviors (e.g. taking tactile-bodily initiatives themselves, recognizing tactile-bodily initiatives of a particular person who is CDB) according to the intervention aims. The coach, by means of video analysis, defines the intervention aims and target behaviors with regard to tactile-bodily communication (e.g. narrative-based communication) during the seventh step. During the eighth step, the coach trains the communication partners in using tactile-bodily communicative behaviors with regard to narrative-based communication (e.g. creating shared attention, recognizing points of interest ('highlights') for a particular person with CDB that can function as a starting point for non-functional communication). During the ninth and final step, the coach evaluates the intervention with the communication partners during a team meeting.

Chapter 3 describes the pilot study that was carried out to test the

implementation of the IMTC. For the purpose of this pilot study, the IMTC was implemented for a young boy who is CDB and two of his communication partners. In order to test the implementation of the IMTC this pilot study examined the effects of the intervention for the boy who is CDB and his communication partners by means of several observational categories: 1) auditory initiatives; 2) tactile-bodily initiatives, and; 3) tactile-bodily signs and/or gestures.

For this pilot study, the IMTC resulted in the decrease that was expected for the observational category of auditory initiatives used by the communication partners. With regard to the observational category of tactile-bodily signs and/or gestures used by the communication partners, the outcomes of the pilot study show the expected increase. For the observational category of tactile-bodily initiatives the outcomes differed for the two communication partners. Whereas for communication partner 1 a non-expected decrease in the use of tactile-bodily initiatives was observed, observations for communication partner 2 showed the expected increase for this observational category. In general, the measurements of the observational categories for the young boy who is CDB indicated expected increases for all observational categories.

Based on the findings of this pilot study, the preliminary conclusion that can be drawn with regard to the applicability of the IMTC was that the IMTC was successfully applicable in practice.

Chapter 4 presents the implementation of the IMTC during a first effect study. For this study the IMTC was applied to five persons who are congenitally deafblind and their communication partners. Again, effects of the intervention were measured by means of three observational categories:

1) auditory initiatives; 2) tactile-bodily initiatives, and; 3) tactile-bodily signs and/or gestures.

Data analysis revealed that the findings for all five persons who are CDB and their communication partners varied. Intervention effects were observed for 2 communication partners for the observational category of auditory initiatives. For the observational category of tactile-bodily initiatives, intervention effects were observed for 4 communication partners. Intervention effects for the observational category of tactile-bodily signs and/or gestures were observed for three communication partners. Measurements of the observational categories for the persons who are CDB indicated intervention effects for the categories of tactile-bodily initiatives and tactile-bodily signs and/or gestures.

Since this first effect study indicated that the intervention was effective across communication partners, settings and interactional contexts, the outcomes endorsed those of the pilot study.

Since the principles of evidence based research require replication of the intervention among several subjects and within different studies, a second effect study was carried out on behalf of the IMTC. This second effect study is described in **Chapter 5**. During this second effect study the IMTC was applied to three persons who are congenitally deafblind and their communication partners. Again, the three observational categories that have been introduced before were used for measuring the effectiveness of the IMTC: 1) auditory initiatives; 2) tactile-bodily initiatives, and; 3) tactile-bodily signs and/or gestures.

Data analysis indicated that the outcomes for all three persons who are CDB and their communication partners varied. Whereas expected decreases for the observational category of auditory initiatives appeared for

only one communication partner, non-expected increases were observed for two communication partners. For the observational category of tactile-bodily initiatives, expected increases were measured for two communication partners. A slight, non-expected, decrease for this observational category was observed for one communication partner. Expected increases for the observational category of tactile-bodily signs and/or gestures were observed for all three communication partners. Intervention effects were observed the observational categories of auditory initiatives and tactile-bodily initiatives for the persons who are CDB.

Chapter 6 is aimed at a general discussion based on the preceding chapters on the IMTC. This chapter describes the major findings of the pilot study and effect studies that were carried out with regard to the IMTC, discusses the most important critical considerations with regard to this thesis and defines recommendations for future research.

